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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/998,807	11/01/2001	Charles Kannankeril	D-30221-01	5938

7590 03/28/2003

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EXAMINER

CHANG, VICTOR S

ART UNIT	PAPER NUMBER
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1771

3

DATE MAILED: 03/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application N .	Applicant(s)	
	09/998,807	KANNANKERIL, CHARLES	
	Examiner	Art Unit	
	Victor S Chang	1771	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_ .
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 19-45 and 47-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-45 and 47-50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_ .  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |                                                                                                              |                                                                             |
|--------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 6) <input type="checkbox"/> Other: ____ .                                   |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-18 and 46, drawn to a composite material, classified in class 428, subclass 304.4.
  - II. Claims 19-45 and 47-50, drawn to a composite material, classified in class 428, subclass 304.4.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions Group I and Group II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the combination as claimed in claim 1 does not require the particulars of the subcombination as claimed in claim 19 for patentability. The subcombination has separate utility such as a cushioning material.
3. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

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4. During a telephone conversation with Daniel Ruble on 3/17/2003 a provisional election was made without traverse to prosecute the invention of Group II, claims 19-45 and 47-50. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-18 and 46 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 19-45 and 47-50 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The size, shape, number and location of perforations in the land areas are critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

More particularly, the Specification teaches that perforations are formed in the land areas to more freely allow vapor to pass through the first and second thermoplastic films (Specification, page 4, lines 24-26). However, the size, shape, number and location of perforations in the land areas are absent from the independent claim 19, which renders the instant claimed invention not enabling, i.e., one skilled in the art would not know where and how to place the perforations.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 19-45 and 47-50 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 19, lines 1 and 2, and throughout all the dependent claims, the term "material" is vague and indefinite, i.e., it is not clear the claimed invention is a composition or a structured article. Clarification is requested.

In claim 19, line 4, the phrase "land areas define perforations" is vague, indefinite and confusing, i.e., it is not clear how the land areas define the perforation structures, such as the size, shape, number and location of the perforations.

Additionally, while Applicant may be his or her own lexicographer, a term in a claim may not be given a meaning repugnant to the usual meaning of that term. See *In re Hill*, 161 F.2d 367, 73 USPQ 482 (CCPA 1947). The term "moisture" in claim 19, line 6, is used by the claim to mean "water," while the usually accepted meaning is "moisture vapor or water vapor." Appropriate corrections in claim 19 and corresponding Specification, e.g., page 3, lines 25-26, are required.

In claim 24, the term "barrier" is vague and indefinite, i.e., it is not clear what barrier property is being claimed.

In claim 26, the phrase "low density" is vague and indefinite, i.e., it is not clear what constitutes "low density".

Claims 27 and 32 appear to be de facto duplicates.

In claim 29, the phrase "high density" is vague and indefinite, i.e., it is not clear what constitutes "high density".

In claim 30, lines 1-2, the phrase "each independently selected" is vague, indefinite and confusing. Clarification is requested.

Claims 34 and 37 also appear to be de facto duplicates.

Claim 35 should be re-written with proper Markush language.

In claim 40, line 2, the phrase "substantially coextensive" is vague and indefinite, i.e., it is not clear what is the scope of the "substantially coextensive".

In claim 42, the phrase "breathable adhesive" is vague and indefinite, it appears that Applicant teaches a foamed adhesive with open-cells (Specification, page 6, lines 1-3). Clarification is requested.

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 19-45 and 47-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Orologio (US 6514596) either taken individually, or in view of Waggoner et al. (US 6355333).

Orologio's invention is directed to bubble-pack thermal and moisture resistant insulation sheet materials for use in the construction of buildings, roads, septic fields,

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aircraft runways and the like (column 1, lines 6-9). Orologio teaches a composite bubble-pack assembly comprising (i) a first bubble pack having a first thermoplastic film having a plurality of portions wherein each of said portions defines a cavity and a second thermoplastic film in sealed engagement with said first film to provide a plurality of closed said cavities; (ii) a second bubble-pack having a third thermoplastic film having a plurality of portions wherein each of said portions defines a cavity and a fourth thermoplastic film in sealed engagement with said third film to provide a plurality of closed said cavities; and (iii) a film selected from a thin foil of metal or a metallized thermoplastic film interposed between and bonded to said first bubble-pack and said second bubble-pack (column 4, lines 52-65).

For claims 19-20, 22, 27, 32 and 39, it is noted that Orologio lacks an express teaching that the insulation sheet materials are perforated and laminated to a moisture permeable and waterproof barrier backing. However, it is believed that a barrier sheet comprises a laminate of a perforated film and a moisture permeable and waterproof barrier backing is old and well known. Alternatively, Waggoner's invention is directed to a construction membrane (Abstract). Waggoner teaches that it is known art that while barrier sheet materials should be substantially impermeable to liquid water and air, they should not trap moisture vapor within walls where the vapor could condense as water and cause mildew or structural damage (column 1, lines 35-38). Additionally, barrier sheet materials include asphalt impregnated kraft papers and felts, perforated polymer films, spunbonded polymer sheets, and microporous film laminates (column 1, lines 44-47). As such, it would have been obvious to one skilled in the art to perforate Orologio's

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insulation bubble bubble-pack in the land area, and laminated<sup>it</sup><sub>^</sub> to a moisture permeable, waterproof backing such as a spunbonded polymer sheet, motivated by the desire to obtain improved moisture permeability and waterproof property.

For claim 21, it is believed that laminating the insulating layer between two barrier face sheets is old and well known.

For claims 23-26 and 30-31, although Orologio is silent about the process of making the films for forming the insulating bubble-pack, it is believed that forming bubble-pack from coextruded films is old and well known. Further, Orologio expressly teaches that the thermoplastic films used to form the composite bubble-pack assembly are selected from the group consisting of a low density polyethylene, a linear low density polyethylene and a nylon (column 5, line 6 to column 6, line 3). It should be noted that the nylon film is inherently a gas barrier film.

For claims 28-29 and 33-38, Waggoner teaches that flat sheets that can be used in making the barrier sheet material include sheets of spunbonded synthetic fibers such as polyethylene, polypropylene or polyester fibers, etc. (column 8, lines 26-31). Further, a preferred polyethylene polymer is a linear polyethylene which has an upper melting range limit of about 130° to 135°C and a density in the range of 0.94 to 0.98 g/cm<sup>3</sup> (column 8, line 66 to column 9, line 2).

For claims 40 and 43, since it is well known that both Orologio's bubble-pack insulating material and the barrier sheet material such as spunbonded synthetic fiber sheets are inherently flexible with extensibility, it is believed that they are also inherently "substantially coextensive".



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For claims 41, 42 and 44-45, it is believed that lamination by applying adhesives between the layers and applying a layer of adhesive on a laminate for attachment are old and well known.

The method claims 47-50 essentially employ only clearly conventional method steps, and as such are rejected.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In addition, the following references are cited of interest for making heat-insulating material:

US 4401706 to Sovilla

US 4344536 to Oberhuber

Derwent Abstract of JP 11000956A

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S Chang whose telephone number is 703-605-4296. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

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VSC  
March 19, 2003

DANIEL ZIRKER  
PRIMARY EXAMINER  
GROUP ~~1300~~  
1700

*Daniel Zinker*